

*CLAIM AMENDMENTS*

1. (Currently Amended) A rangefinder apparatus comprising:

autofocus (AF) data generating means for forming an image of light from an object at a distance to be subjected to determined by rangefinding onto a pair of line sensors, each line sensor including a plurality of light-receiving detecting elements, and generating AF data for computing a correlation value according to signals obtained from produced by the light-receiving detecting elements;

AF data acquiring means for acquiring the AF data from a pair of ~~employed~~ sensor areas used for the rangefinding in and respectively within the pair of line sensors;

correlation value computing means for determining a pair of window areas for selecting the AF data to be used for computing the correlation value within the pair of ~~employed~~ sensor areas, and successively computing correlation values while shifting the pair of window areas;

interpolated correlation extreme value computing means for detecting ~~a~~ correlation extreme ~~value(s) values~~, among the correlation values computed by the correlation value computing means, and interpolating ~~thus-detected the correlation extreme value(s) so as~~ values to compute an interpolated correlation extreme value(s) values;

highest correlation value detecting means for detecting as a highest correlation value the interpolated correlation extreme value exhibiting the highest correlation, among the interpolated correlation extreme ~~value(s) values~~;

shift amount computing means for computing a shift amount of the window areas yielding the highest correlation value; and

object distance calculating means for calculating ~~a~~ the distance to the object according to the shift amount computed by the shift amount computing means.

2. (Currently Amended) The rangefinder apparatus according to claim 1, further comprising

oscillation degree calculating means for calculating a value indicative of an oscillation degree of the AF data, wherein

the interpolated correlation extreme value computing means ~~computing~~ computes the interpolated correlation extreme ~~value(s) on the condition that~~ values if the value indicative of the oscillation degree calculated by the oscillation degree calculating means is greater than a predetermined reference value, and

the highest correlation value detecting means ~~detecting~~ detects the highest correlation value from the correlation extreme ~~value(s) that is~~ values not interpolated ~~when, if~~ the value indicative of the oscillation degree calculated by the oscillation degree calculating means is ~~at or smaller~~ no larger than a the predetermined reference value.

3. (Currently Amended) The rangefinder apparatus according to claim 1, further comprising comparing means for detecting a first correlation extreme value exhibiting the highest correlation and a second correlation extreme value exhibiting the second highest correlation in the correlation extreme values that are not interpolated, and ~~judging~~ determining whether a difference between the first correlation extreme value and the second correlation extreme value, normalized by the first correlation extreme value, is adequately large by comparing a ratio of the second correlation extreme value to the first correlation extreme value with a predetermined reference value, wherein

the interpolated correlation extreme value computing means ~~computing~~ computes the interpolated correlation extreme ~~value(s) on the condition that~~ values if the comparing means ~~judges~~ determines that the difference is not adequately large, and

the highest correlation value detecting means ~~detecting~~ detects the highest correlation value from the correlation extreme ~~value(s) that is~~ values not interpolated ~~when, if~~ the comparing means ~~judges~~ determines that the difference is adequately large.

4. (Currently Amended) The rangefinder apparatus according to claim 1, further comprising first determining means for determining ~~the~~ validity of the interpolated correlation extreme ~~value(s)~~ values computed by the interpolated correlation extreme value computing means, wherein the highest correlation value detecting means ~~detecting~~ detects the highest correlation value from the correlation extreme ~~value(s) that is~~ values not interpolated ~~when, if~~ the first determining means determines that the interpolated correlation extreme ~~value(s) is~~ values are invalid.

5. (Currently Amended) The rangefinder apparatus according to claim 1, further comprising second determining means for determining ~~the capability~~ ability to calculate the distance to the object by comparing ~~the~~ difference between a first interpolated correlation extreme value exhibiting the highest correlation and a second interpolated correlation extreme value exhibiting the second highest correlation in the interpolated correlation extreme values computed by the interpolated correlation extreme value computing means ~~with,~~ to a predetermined reference value.

6. (Original) The rangefinder apparatus according to claim 5, wherein the second determining means changes the predetermined reference value according to the first interpolated correlation extreme value.

7. (Currently Amended) The rangefinder apparatus according to claim 1, wherein the shift amount of the window areas yielding the highest correlation ~~value~~ values based on the interpolated correlation extreme ~~value(s)~~ values is computed using an arithmetic expression that is used in computing the interpolated correlation extreme ~~value(s)~~ values.

8. (Original) A camera comprising the rangefinder apparatus according to claim 1.